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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,490	01/04/2001	Wail Refai	8194-479	2897
20792	7590	12/20/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			WONG, BLANCHE	
PO BOX 37428			ART UNIT	
RALEIGH, NC 27627			PAPER NUMBER	
			2667	
DATE MAILED: 12/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/754,490	<b>Applicant(s)</b> REFAI ET AL.	
	<b>Examiner</b> Blanche Wong	<b>Art Unit</b> 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-18 and 20-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-18 and 20-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The finality of Office Action, dated September 6, 2005, has been withdrawn.
2. Examiner apologizes for the confusion between the Specification that was submitted January 4, 2001, along with the present application, and the one found in Patent Application Publication (Pub. No. US 2002/0126637 A1) that includes paragraph numbers.

### ***Response to Arguments***

3. Applicant's arguments, see Amendment After Final Action, filed November 9, 2005, with respect to the rejection(s) of claim(s) 1,14,24,32,36,40 under §112, first paragraph have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Czaja et al. (U.S. Pat No. 6,567,666).

### ***Claim Objections***

4. Claims 2,15,25,37,41 are objected to because of the following informalities:  
  
In ln. 3-4, Examiner suggests replacing – the first and second sets of radio – with “the first and second sets of radio configurations”. Similarly in cl. 15,25,37,41.  
  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims **24-31 and 40-44** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to cl. 24, it is unclear whether – the identified common radio configuration using a common channel coding including a common spreading code – in ln. 7-9, is the same as – a common radio configuration – that is identified in ln. 4-5. Similarly in cl. 40.

7. Claim 40 recites the limitation "first and second base stations" in ln. 3-4. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-3,5,7-9,13-18,20,23-26,29,30,32,35-39,40-43** are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Czaja et al. (U.S. Pat No. 6,567,666).

With regard to cl. 1,24,30,32,36,40 Czaja discloses communicating between the wireless terminal (a mobile station, col. 1, ln. 36)(it is inherent in a handoff that there is communication between a mobile station and base stations) and a first node (a base station in a 2G system) according to a first radio configuration (2G) of a first set of radio configurations supported by the first node (handoff between inter-generation systems, col. 2, ln. 45; See also two different generations of CDMA systems, co. 2, ln. 30-31; See also 2G or IS-95 and 3G or CDMA2000 (a.k.a. IS-2000), col. 1, ln. 24-32);

identifying a second radio configuration (3G) available for a second node (a base station in a 3G system) that supports a second set of radio configurations that is different from the first set of radio configurations; and

simultaneously communication (a soft handoff SHO, col. 2, ln. 44-46 and ln. 54-59)(a soft handoff would establish a new link before terminating the first link, col. 1, ln. 65) between the wireless terminal (the mobile station) and respective ones of the first and second nodes according to the identified second radio configuration (3G), using a common channel coding including a common spreading code (It is inherent that in order for the mobile station and base stations to communicate, same data coding and error correction scheme are used. Thus, common channel coding. It is also inherent that in a handoff, the first and second base stations must support the same channelization code with time shift. Thus, common spreading code. That is, all base stations that operates within the same system, e.g. IS-95, would use the same spreading code/PN code with different PN offset/time shift. The PN code identifies the base station within the system and the PN offset specifies the base station. See also Plestid et al. (U.S. Pat No. 6,553,230, col. 1, ln. 22-29.), as recited in claim 1.

With regard to cl. 2,15,25,37,41, Czaja discloses a method according to cl. 1 and 14, and further discloses a first one (2G) of the first and second sets of radio configurations is constrained to radio configurations that are compliant with a wireless communication standard (IS-95), and a second one (3G) of the first and second sets of radio configurations comprises radio configurations compliant with the wireless

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communications standard (IS-95) and radio configurations that are non-complaint with the wireless communication standard (IS-2000).

With regard to cl. 3,16,26,38,42, Czaja discloses a method according to cl. 1 and 14, further discloses a first one (2G) of the first and second set of radio configurations is constrained to IS-95 compliant radio configurations, and a second one (3G) of the first and second sets of radio configurations includes IS-2000 compliant radio configurations that are non-compliant with IS-95.

With regard to cl. 5 and 20, Czaja discloses a method according to cl. 1 and 14, and further discloses receiving first and second signals (simultaneously communicating is receiving both signals at the same time, thus soft handoff)(a soft handoff would establish a new link before terminating the first link, col. 1, ln. 65)(a soft handoff SHO, col. 2, ln. 44-46 and ln. 54-59), transmitted from respective ones of the first and second nodes (base stations) at the wireless terminal (a mobile station); and processing the first and second signals according to a common process (messaging structure, col. 2, ln. 32).

With regard to cl. 7,23,29,35,39, Czaja discloses a method according to cl. 1 and 14, and further discloses CDMA (col. 1, ln. 14-15).

With regard to cl. 8, Czaja discloses a method according to cl. 1 and further discloses the first node (2G or IS-95) supports a first set of radio configurations (RS-1

and RS-2, col. 6, ln. 25) and the second node (3G or IS-2000) supports a second set of radio configurations (RC-1 to RC-5, col. 6, ln. 26) that includes only a subset (SHO between RS-1 and RC-1, and RS-2 and RC-2, col. 6, ln. 28) of first set of radio configurations (RS-1 and RS-2, col. 6, ln. 25).

With regard to cl. 9, Czaja discloses a method according to cl. 1 and further discloses the first node (3G or IS-2000) supports a first set of radio configurations (RC-1 to RC-5, col. 6, ln. 26), wherein the second node (2G or IS-95) supports a second set of radio configurations (RS-1 and RS-2, col. 6, ln. 25), and wherein the first set of radio configurations includes only a subset (SHO between RS-1 and RC-1, and RS-2 and RC-2, col. 6, ln. 28) of the second set of radio configurations (RS-1 and RS-2, col. 6, ln. 25).

With regard to cl. 13, Czaja discloses a method of cl. 1 and further discloses following by terminating communications between the wireless terminal and the first node while continuing communications between the wireless terminal and the second node (a soft handoff SHO, col. 2, ln. 44-46 and ln. 54-59)(a soft handoff would establish a new link before terminating the first link, col. 1, ln. 65).

With regard to cl. 14 and 40, Czaja discloses  
determining whether a common radio configuration (it is inherent that there is a step to determine a common radio configuration before handoff) having a common channel coding (it is inherent that there is common channel coding in order for the

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mobile station to simultaneously communicate with both base stations before handoff) including a common spreading code (it is inherent that in order to achieve common channel coding, there is a common spreading code because spreading codes are used to define channels, that is, used for channel coding) is available for the first and second base stations; and

handing off the wireless terminal from the first base station to the second base station based on the determination of whether a common radio configuration is available for the first and second base stations (it is inherent that there is a common radio configuration before handoff),

as recited in cl. 14.

With regard to cl. 17 and 43, Czaja discloses a method according to claim 14 and further discloses performing a soft handoff of the wireless terminal using the common radio configuration (a soft handoff SHO, col. 2, ln. 44-46 and ln. 54-59).

With regard to cl. 18, Czaja discloses a method of cl. 17 and further discloses changing (performing a true SHO, col. 6, ln. 37-40) the radio configuration used for communications between the first base station and the wireless terminal to the common radio configuration (a true SHO between RS-1 and RC-1, and RS-2 and RC-2, col. 6, ln. 28), and then

communicating (performing a true SHO, col. 6, ln. 37-40) between the second base station and the wireless terminal according to the common radio configuration (a true SHO between RS-1 and RC-1, and RS-2 and RC-2, col. 6, ln. 28).



***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 6 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Czaja in view of Bender (U.S. Pat No. 6,253,085).

With regard to cl. 6 and 21, Czaja discloses a method according to claims 5 and 20. Czaja further discloses receiving a composite signal (combines signals from both generation systems, col. 2, ln. 55) including the first and second signals. However, Czaja fails to explicitly show processing the composite signal according to a RAKE process.

In an analogous art, Bender discloses processing the composite signal according to a RAKE process (a rake receiver to demodulate two separate signals from two different base station and the two signals are combined to yield a composite signal, col. 1, ln. 27-30).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process the composite signal according to a RAKE process. The suggestion/motivation to do so would have been to provide a smooth soft handoff and better quality signal. Bender, col 1, ln. 24-36. Therefore, it would have been obvious to combine Bender with Czaja for the benefit of processing the composite signal according to a RAKE process, to obtain the invention as specified in cl. 6 and 21.

12. **Claims 10-12,27,28,31,33,34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Czaja in view of Hottinen et al. (U.S. Pat NO. 6,611,507).

With regard to claim 10, Czaja discloses a method according to cl. 1. However, Czaja fails to explicitly show identifying the second node as a best candidate node according to a predetermined criterion.

In an analogous art, Hottinen discloses a predetermined criterion (a predetermined power threshold for handoff, col. 8, ln. 58-60).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a predetermined criterion. The suggestion/motivation for doing so would have been to control communication handoff (Hottinen, col. 3, ln. 15) and to keep a relative quality of the handoff (Hottinen, col. 2, ln. 22). Therefore, it would have been obvious to combine Hottinen with Czaja for the benefit of a predetermined criterion, to obtain the invention as specified in cl. 10.

With regard to cl. 11,28,33, Czaja discloses a method according to cl. 1. However, Czaja fails to explicitly show preceding by requesting communication according to the second radio configuration from the wireless terminal.

In an analogous art, Hottinen discloses preceding by requesting communication according to the second radio configuration from the wireless terminal (a mobile station handoff request is sent from the mobile station to the "new" base station ... preceded by commanding the wireless terminal to communicate according to the second radio configuration, col. 8, ln. 61-62).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to precede by requesting communication according to the second radio configuration from the wireless terminal. The suggestion/motivation for doing so would have been to control communication handoff (Hottinen, col. 3, ln. 15) and to keep a relative quality of the handoff (Hottinen, col. 2, ln. 22). Therefore, it would have been obvious to combine Hottinen with Czaja for the benefit of preceding by requesting communication according to the second radio configuration from the wireless terminal, to obtain the invention as specified in cl. 11.

With regard to cl. 12,27,34, Czaja discloses a method according to cl. 1. However, Czaja fails to explicitly show preceding by commanding the wireless terminal to communicate according to the second radio configuration.

In an analogous art, Hottinen discloses preceding by commanding the wireless terminal to communicate according to the second radio configuration (a mobile station handoff request is sent from the mobile station to the "new" base station ... preceded by commanding the wireless terminal to communicate according to the second radio configuration, col. 8, ln. 61-62).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to precede by commanding the wireless terminal to communicate according to the second radio configuration. The suggestion/motivation for doing so would have been to control communication handoff (Hottinen, col. 3, ln. 15) and to keep a relative quality of the handoff (Hottinen, col. 2, ln. 22). Therefore, it would have been obvious to combine Hottinen with Czaja for the benefit of preceding by commanding the

wireless terminal to communicate according to the second radio configuration, to obtain the invention as specified in cl. 12.

With regard to claim 31, Czaja discloses a system according to cl. 24. However, Czaja fails to explicitly show the radio configuration control circuit is positioned at a mobile switching center.

In an analogous art, Hottinen also discloses the radio configuration control circuit is positioned at a mobile switching center 510 (MSC provides an interface, col. 7, ln. 32).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a radio configuration control circuit that is positioned at a mobile switching center. The suggestion/motivation for doing so would have been to control communication handoff (Hottinen, col. 3, ln. 15) and to keep a relative quality of the handoff (Hottinen, col. 2, ln. 22). Therefore, it would have been obvious to combine Hottinen with Czaja for the benefit of a radio configuration control circuit that is positioned at a mobile switching center, to obtain the invention as specified in cl. 31.

13. **Claims 22 and 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Czaja in view of Tiedemann Jr. (U.S. Pat No. 5,926,470).

With regard to cl. 22 and 44, Czaja discloses a method according to cl. 14. However, Czaja fails to explicitly show performing a hard handoff from the first base station to the second base station if a common radio configuration is not available.

In an analogous art, Tiedemann discloses performing a hard handoff from the first base station to the second base station if a common radio configuration is not available (a system and method for determining the regions within the coverage area where hard handoff is both necessary and likely to be accomplished successfully and to which of the base stations should the hard handoff be attempted, col. 12, ln. 33-37.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include performing a hard handoff from the first base station to the second base station if a common radio configuration is not available. The suggestion/motivation to do so would have been to provide "intersystem" handoffs when resources are not available to conduct intersystem soft handoffs. Tiedemann, col. 3, ln. 55-57. Therefore, it would have been obvious to combine Tiedemann with Czaja for the benefit of performing a hard handoff from the first base station to the second base station if a common radio configuration is not available, to obtain the invention as specified in claim 22.

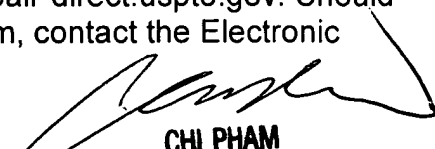
### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW, November 30, 2005

  
**CHI PHAM**  
**PERMISSORY PATENT EXAMINER**  
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